Ingredient Dictionary

The first name is the common one; the name in brackets is the one on the ingredient list (INCI) where it differs. The label is the one given to the main claim about that ingredient in the book.

Adapalene. A synthetic, stable retinoid that irritates less than tretinoin. Used for acne; higher strengths for sun-damaged skin. Sold without a prescription in some countries. **(Moderate evidence)** for sun-damaged skin; **(Strong evidence)** for acne as part of the topical retinoid group. Chapters 5, 10.

AHAs, alpha hydroxy acids (glycolic acid, lactic acid). Help the outer layer shed evenly, making skin smoother and more even. Increase sun sensitivity. **(Moderate evidence)** Chapter 7.

Azelaic acid. Calms inflammation, kills acne bacteria, slows pigment production. Used for melasma, post-acne marks, acne and rosacea. **(Moderate evidence)** for melasma. Chapters 7, 11, 12.

Bakuchiol. A plant extract, not a retinoid, often marketed as "natural retinol." Gentler than retinol; not shown to work as well. **(Debated)** Chapter 5.

Benzoyl peroxide. Kills acne bacteria, which can't become resistant to it. Two and a half to 5 percent is usually enough. Bleaches fabric. **(Strong evidence)** Chapter 10.

BHA, beta hydroxy acid (salicylic acid). Dissolves in oil and loosens plugs in pores. Used for blackheads and oily skin. **(Debated)** for acne. Chapters 7, 10.

Biotin (vitamin B7). Found in "hair, skin and nails" supplements. No evidence it improves skin in people who aren't deficient. High doses distort blood tests. **(Unproven)** Chapter 8.

Ceramides. Natural fats in the skin's "mortar." Found in many moisturizers. Not clearly better than ordinary moisturizers. **(Debated)** Chapter 6.

Collagen (in creams). Too large a molecule to reach the dermis; on the skin it simply holds water like any moisturizer. **(Unproven)** for "topping up collagen.". Chapter 2.

Collagen (supplements). Digested into amino acids and short peptides. Meta-analyses disagree. **(Debated)** Chapter 8.

Glycerin. An old, cheap, effective humectant. Found in most moisturizers. Chapter 6.

Hyaluronic acid (sodium hyaluronate). A humectant that plumps skin temporarily. Doesn't "fill" wrinkles like an injection. **(Unproven)** for filling wrinkles. Chapters 6, 7.

Hydroquinone. The classic pigment-fading medicine, used for melasma. Needs a doctor's supervision; long-term unsupervised use can cause exogenous ochronosis. Prescription-only in the United States. **(Strong evidence)** Chapter 11.

Iron oxides (CI 77491, 77492, 77499). Pigments in tinted sunscreens that block some visible light. Helpful for melasma. **(Moderate evidence)** Chapters 4, 11.

Niacinamide. A form of vitamin B3. Strengthens the skin barrier, reduces redness and fades mild pigment spots. Tested strength: 4 to 5 percent. **(Moderate evidence)** Chapter 7. Oral form (nicotinamide):. Chapter 8.

Nicotinamide (oral). Reduces non-melanoma skin cancer in high-risk people. Not the same as niacin. **(Moderate evidence)** Chapter 8.

Parabens (methylparaben, propylparaben...). Preservatives. No evidence they cause breast cancer. **(Unproven)** for causing cancer. Chapter 3.

Peptides (for example, palmitoyl pentapeptide-4). Short amino acid chains designed to "signal" collagen production. Small, company-run trials. **(Debated)** Chapter 7.

Petrolatum (petroleum jelly). One of the most effective and cheapest occlusives. Chapter 6.

Phenoxyethanol. A common preservative; capped at 1 percent in the EU, which makes it useful for estimating the "1 percent line" on an ingredient list. Chapter 3.

Retinal (retinaldehyde). A retinoid one conversion step from retinoic acid. Few trials compare it directly with retinol. **(Debated)** Chapter 5.

Retinol. The most common retinoid in cosmetics. Improves fine lines; needs long-term use. **(Moderate evidence)** Chapter 5.

Retinyl palmitate (retinyl ester). The weakest retinoid, three steps from retinoic acid. **(Unproven)** Chapter 5.

Spironolactone (oral, prescription). Blocks androgens; reduces acne in adult women. Not for use in pregnancy. **(Moderate evidence)** Chapter 10.

Titanium dioxide, zinc oxide. Mineral sunscreen filters. Rarely irritating, suitable for sensitive skin and children. Chapter 4.

Tranexamic acid. A medicine that reduces bleeding; taken by mouth alongside usual treatment, it helps fade melasma. Carries a clot risk in people at risk. **(Moderate evidence)** Chapter 11.

Tretinoin (prescription in many countries). Retinoic acid itself. The retinoid with the strongest evidence for sun-damaged skin. **(Strong evidence)** Chapters 1, 5.

Vitamin C (ascorbic acid). An antioxidant; unstable. Evidence is still thin. **(Debated)** Chapter 7.